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SUPPORT FOR AMENDMENTS

The amendments to independent claims 33 and 34 were made for clarification and are fully supported by the description in the specification (e.g., page 12, line 10 to page 13, line 16; etc). New claim 40 is fully supported by original claim 7. No new matter has been added. Upon entry of this Response, claims 33-40 are present and active in the application.

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REMARKS

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Claim Objections

The objection to claim 37 has been obviated by amendment. As presently written, claim 37 recites protecting groups that comprise acid-labile groups. Protecting groups that comprise acid-stable groups are separately recited in new claim 40. Accordingly, withdrawal of this ground of rejection is respectfully requested.

Claim Rejections – 35 U.S.C. § 112, Second Paragraph

The rejection of claims 34, 36, and 37 under 35 U.S.C. §112, second paragraph as being indefinite is respectfully traversed.

The Examiner alleges that there is no antecedent basis for the word "side" in the phrase "the reactive side groups" as recited in claims 34 and 36. However, this assessment is inaccurate. Independent claim 34 initially recites "amino acids comprising protected reactive side groups" (emphasis added) and then proceeds to recite "deprotecting the reactive side groups" (emphasis added). Accordingly, there is explicit antecedent basis for the word "side" in independent claim 34 and in each of dependent claims 36 and 37.

Withdrawal of this ground of rejection is, therefore, respectfully requested.

Claim Rejections – 35 U.S.C. § 103

The rejection of claims 33-39 under 35 USC § 103 as being unpatentable over *Bredehorst et al.*, *Brinkley*, and the English abstract of *Yang et al.* is respectfully traversed in view of the clarifying amendments to independent claims 33 and 34.

Upon consideration of the Office Action, Applicants respectfully submit that the claimed invention has not been properly understood. The principle misunderstanding appears to be that the claimed invention provides a mechanism for introducing amino acids carrying specific moieties (e.g., hapten molecules, luminescent metal chelates, and/or biotin as in claim 33 or protected reactive side groups that can be deprotected and then coupled to hapten molecules, luminescent metal chelates, and/or biotin as in claim 34) during the synthesis of the carrier—not after the carrier has already been assembled. By introducing the moieties during synthesis of the carrier, defined and

reproducible distances between hapten molecules, luminescent metal chelates, and biotin can be achieved. Independent claims 33 and 34 have been rewritten to emphasize that the introduction of the moieties occurs during synthesis of the carrier.

By contrast to the claimed invention, the references cited in the Office Action all relate to the modification of an existing carrier (e.g., the A-chain of insulin as described in *Bredehorst et al.* and the English abstract of *Yang et al.*). At most, the examiner has provided references describing a portion of independent claim 34 (e.g., placement of a hapten into a peptide after the peptide has already been synthesized); however, an important difference is that these references do not teach or suggest first introducing amino acids comprising protected reactive side groups during synthesis of the peptide (such that the positions where the subsequently added haptens eventually end up are not controlled as in the claimed invention).

For at least all of the reasons set forth above, and in view of the clarifying amendments to independent claims 33 and 34, withdrawal of all grounds of rejection are respectfully requested.

Miscellaneous Comments

Applicants still await a translation of the *Yang et al.* reference, which was to be provided when it became available (page 3 of office action).

In addition, Applicants respectfully request reconsideration of the Expert's Declaration submitted with their Response filed on December 5, 2005 to the extent that it can be applied to the new grounds of rejection. The Examiner states that "[the] interest of the expert in the outcome is great (i.e., it's the expert's application at issue)" as one reason for dismissing the probative value of the Declaration (page 13). For the record, Applicants note that the Expert is not affiliated with this Application in any way—either as an Inventor or as an Assignee; although he is related by marriage to one of Applicants's representatives, this is not sufficient grounds for challenging the objectivity of the Expert's Declaration or for dismissing its probative value.

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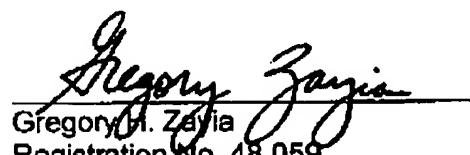
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Conclusion

In view of the Amendment and Remarks set forth above, Applicants respectfully submit that the claimed invention is in condition for allowance. Early notification to such effect is earnestly solicited.

If for any reason the Examiner feels that the above Amendments and Remarks do not put the claims in condition to be allowed, and that a discussion would be helpful, it is respectfully requested that the Examiner contact the undersigned agent directly at (312)-321-4257.

Respectfully submitted,



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